PTÓ 04-749

International Publication
No. WO 95/20200

BEST AVAILABLE COPY

PROCESS AND SYSTEM FOR PROCESSING OF MAILING ENVELOPES

Laurent Ruat

UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C.   DECEMBER 2003
TRANSLATED BY THE RALPH MCELROY TRANSLATION COMPANY

INTERNATIONAL PATENT OFFICE

WORLD ORGANIZATION FOR INTELLECTUAL PROPERTY

International patent published on

the basis of the Patent Cooperation Treaty

INTERNATIONAL PUBLICATION NO. WO 95/20200

International Patent Classification[6]:	G 07 B 17/02
International Filing No.:	PCT/FR95/00065
International Filing Date:	January 20, 1995
International Publication Date:	July 27, 1995

Priority
　　Date:　　　　　　　　　　　　January 21, 1994
　　Country:　　　　　　　　　　France
　　Number:　　　　　　　　　　94/00627

Designated States:　　　　　　　US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT LU, MC, NL, PR, SE)

PROCESS AND SYSTEM FOR PROCESSING OF MAILING ENVELOPES

[Procede et systeme de traitement de plis postaux]

Inventor/applicant (for US only):　　　Laurent Ruat

Applicant (for all designated states except US):　　　Giat Industries

Published:

With international search report.

Before expiration of the time period provided for modification of the claims, will be re-published if modifications are received

FOR INFORMATION ONLY

Codes for the identification of PCT contract states on the cover sheets of the
documents that publish the international applications in accordance with the PCT.

AT	Austria	KP	Democratic People's	
AU	Australia		Republic of Korea	
BB	Barbados	KR	Republic of Korea	
BE	Belgium	KZ	Kazakhstan	
BF	Burkina Faso	LI	Liechtenstein	
BG	Bulgaria	LK	Sri Lanka	
BJ	Benin	LV	Latvia	
BR	Brazil	MA	Morocco	
BY	Belarus	MC	Monaco	
CA	Canada	MD	Republic of Moldavia	
CF	Central African	MG	Madagascar	
	Republic	MK	Macedonia (former	
CG	Congo		Yugoslavian Republic	
CH	Switzerland		of Macedonia)	
CI	Côte d'Ivoire	ML	Mali	
CM	Cameroon	MN	Mongolia	
CN	China	MR	Mauritania	
CS	Czechoslovakia	MW	Malawi	
CZ	Czech Republic	MX	Mexico	
DE	Germany	NE	Niger	
DE	West Germany	NL	Netherlands	
DK	Denmark	NO	Norway	
DM	Dominica	NZ	New Zealand	
DT	Federal Republic of	PL	Poland	
	Germany	PT	Portugal	
DZ	Algeria	RO	Romania	
EE	Estonia	RU	Russian Federation	
EG	Egypt	SD	Sudan	
ES	Spain	SE	Sweden	
FI	Finland	SG	Singapore	
FR	France	SI	Slovenia	
GA	Gabon	SK	Slovak Republic or	
GB	United Kingdom		Slovakia, follow original	
GD	Grenada	SL	Sierra Leone	
GE	Georgia	SN	Senegal	
GH	Ghana	TD	Chad	
GM	Gambia	TG	Togo	
GN	Guinea	TJ	Tajikistan	
GR	Greece	TT	Trinidad and Tobago	
HK	Hong Kong	UA	Ukraine	
HR	Croatia	UG	Uganda	
HU	Hungary	US	United States of	
ID	Indonesia		America	
IE	Ireland	UZ	Uzbekistan	
IL	Israel	VN	Vietnam	
IN	India			
IR	Iran			
IS	Iceland			
IT	Italy			
JP	Japan			
KE	Kenya			
KG	Kyrgyzstan			

3

The invention relates to a process and to a system for processing of mailing envelopes,   /1
such as letters, packets, packages, etc.

The postal services are equipped with automatic sorting systems using software with optical recognition of characters intended to make possible automatic reading of at least part of the addresses borne by the mailing envelopes. However, these addresses are often very difficult to read automatically and are sometimes poorly written or incomplete, so that numerous envelopes are rejected by the automatic sorting installations and must be sorted by postal workers.

Already proposed is the printing on the mailing envelopes of an item of information in the form of a bar code, corresponding to the destination and/or to the routing of a letter, which is easier to read, with a very low error rate, by the automatic reading means of the sorting installations.

Currently these information items in the form of a bar code are printed on the mailing envelopes by the postal services. This requires the reading by the postal workers of a part of the address of each mailing envelope, the entering of a city name or of a postal code in an information processing system by typing on a keyboard, and the printing of a bar code on the mailing envelope. These means are slow and require numerous personnel for their functioning, which makes them expensive.

The checking of the postage of the mailing envelopes poses other problems, particularly with regard to the use of stamping machines installed at the sites of customers who are generally senders of a large amount of mail.

Already proposed in the patent FR 2 580 844 are systems which establish a link between a customer and a post office and which allow the customer, after the post office has verified that   /2
his account is sufficiently provisioned, to print, on an envelope which he wishes to send, postage information of the alphanumeric or bar code type and encrypted information items elaborated from the postage information and data relating to the recipient of the envelope. These encrypted information items can be read automatically by the postal services in order to verify the authenticity of the postage information, that is to say in order to verify that the value of the postage was paid beforehand by the sender.

These systems have the disadvantage of being pre-payment systems; they only function if the account of the customer is sufficiently provisioned; they do not stop fraud because the customer can send several envelopes the same day to the same recipient and only pay the postage of a single envelope; they require quasi-permanent or long duration links between the large

---

* [Numbers in the right margin indicate pagination of the original text.]

volume mail senders and the post offices; and they make the customer pay the price of all the postages borne on the mailing envelopes including on those which in the end are not sent.

The invention relates to a process and to a system for processing of mailing envelopes which do not have the aforementioned disadvantages.

It relates to a process and system of this type which prohibit fraud, which do not require a link of varying duration between a post office and a customer and in which only the mailing envelopes actually sent are invoiced, the accounting of the postages and of the sending of the envelopes furthermore taking place in the postal services and not at the site of the customer.

It also relates to a process and system of this type which can also be used by non-customer-persons.

It also relates to a process and system of this type which contribute a simple and effective solution to the problems of automatic sorting and checking of postage.

To this effect, it proposes a process for processing of mailing envelopes, aiming to facilitate the automatic sorting of the envelopes as a function of their destination and the payment of their postage, this process consisting of having affixed on each envelope, by the sender, coded information items which can be read by automatic reading means and including data relating to the sender and to the recipient of the envelope and to its postage, certain of the coded information items being encrypted moreover, characterized by the fact that it consists, when the envelope is sent, of having the coded information items appearing on the envelope read automatically by the postal services in order identify the sender at least partially, of accessing an encryption key from the identity of the sender, of decrypting the encrypted information items using the aforementioned key and of debiting an account of the sender with a sum corresponding to the decrypted value of the postage of the envelope.

The process according to the invention avoids the use of postage stamps and makes it possible to do automatic accounting and invoicing of the postages of the mailing envelopes, and simultaneously to automatically sort the envelopes as a function of their destination.

Frauds are made impossible inasmuch as the encrypted information items can only be decrypted by the postal service, third parties having no access to the encryption keys which are not part of the data printed on the mailing envelopes.

Furthermore, the encrypted information items included in the coded information are preferably different from and supplementary to the coded and non-encrypted information, so that the decrypting of the encrypted information items provides confirmation of the coded and non-encrypted information, which reinforces security against attempts at fraud.

The coded and non-encrypted information items appearing on an envelope can include the name of the recipient and the name and address of the sender and/or a customer number.

5

The coded and encrypted information items appearing on the envelope can include the amount of the postage, the date of the postage, the address of the recipient, information relating to the identity of the sender, different from that appearing in the coded and non-encrypted information, and possibly information on the type of mailing envelope (slow or fast mail, letter, registered letter, registered letter with acknowledgement of the receipt, packet, registered packet, etc.).

Advantageously, the coded information items appearing on the mailing envelope are in the form of a bar code of a sophisticated type such as PDF 417.

The use of such a code allows one to have a greater quantity of data appear on the mailing envelope than with a bar code of an ordinary type. Moreover, a code such as PDF-417 contains error correcting codes, so that defects in printing or reading of the coded information do not prevent normal processing of the mailing envelope by a sorting installation containing automatic reading means.

The invention also proposes a system for processing of mailing envelopes, which includes some computer means for the entering, encryption and coding of information relating to the sender and to the recipient of an envelope as well as to its postage, and for printing, on the envelope or on a label, coded information items, certain ones of which are encrypted, and some means installed in the postal services for automatic reading of the coded information appearing on the envelopes, in particular for checking the postage and automatic sorting of the envelopes, characterized by the fact that said automatic reading means are connected to some means for processing of the information which have memories in which encryption keys are recorded, each of which corresponds to a different known sender, these information processing means allowing one to access an encryption key from coded and non-encrypted information items read on the envelope, to decrypt the encrypted information read on the envelope using this key, to record in memory at least the value of postage of the envelope and the identity of its sender and to do an automatic accounting of the envelopes mailed by known senders, particularly for the purpose of their invoicing.

The aforementioned computer means used by the senders can advantageously include some means of determination of the postage values of the envelopes.

These computer means are generally installed at the site of the customer but can also be installed in public places so as to be available to users who are not customers.

The invention will be better understood and other characteristics, details and advantages of it will appear more clearly upon reading of the following description given as an example in reference to the appended drawings in which:

Figure 1 diagrammatically represents a computer device installed at the site of a customer and a mailing envelope processed by this device;

/5

6

Figure 2 diagrammatically represents a variant of the computer device installed at the site   /C
of a customer and a mailing envelope processed by this variant;

Figure 3 represents another variant of execution of this computer device;

Figure 4 diagrammatically represents a mailing envelope processed by the device of
Figure 3;

Figure 5 is an enlarged view of the coded information appearing on the mailing envelope
of Figure 4;

Figure 6 diagrammatically represents the means installed in the postal services;

Figure 7 is a flow chart of the essential operations of the process according to the
invention.

The device represented in Figure 1 is intended to be installed at the site of a mailing
envelope sender to whom it has been rented, lent or sold by the postal service, this device
including terminal 10, for example, of the "videotex terminal" type, which has display screen 12
and keyboard 14, which is connected to system 16 for processing of the information, which is
itself connected, coming out, to printer 18 for printing of labels 20 which are intended to be
attached on mailing envelopes 22.

Information processing system 16 can be present in the form of a sealed box provided
with an input connector and an output connector and arranged in which are at least a
microprocessor, a read-write memory and a read-only memory in which a software is recorded
allowing one to code and encrypt data entered by means of keyboard 14 of terminal 10.

The code which is used can be a bar code, such as that known under the designation
"128" or a more sophisticated code, such as that known under the designation PDF 417 and
which will be described in more detail in reference to Figures 4 and 5.

For the encryption of the data, it is possible to use any cipher known to be secure, such   /7
as, for example, DES, and to assign a different encryption key to each known sender or
customer. Computer system 16 turned over to a known sender or to a customer contains the
encryption key assigned to this sender or to this customer, in a memory which cannot be
accessed from the outside. Furthermore, it is possible to provide a means of automatic
modification of the encryption keys.

The means represented in Figure 1 are used in the following way:.

the name and address of the recipient of a mailing envelope are entered by means of
keyboard 14 of terminal 10 and are transmitted to computer system 16 with the amount of the
postage of the mailing envelope. This postage amount can itself also be entered by means of
keyboard 14 or determined more or less automatically by terminal 10 or by means associated
with this terminal. The data transmitted to computer system 16 also include information on the
identity of the sender, on the type of mailing envelope sent (slow, fast, registered or not, etc...)

and on the stamping date, and are encrypted in the case of some of them and coded in the form of a bar code in the example which is represented, which is printed by printer 24 on label 20 next to the name and address of the recipient which are printed in alphanumeric characters on this label.

Coded information items 24 therefore include non-encrypted data such as the name of the recipient and information relating to the sender, and encrypted data which include the amount of the postage, its date, the address of the recipient, additional information on the identity of the sender and on the type of mailing envelope which is sent.

Of course, the encrypted data relating to the recipient can include all or part of the complete name and address of this recipient, just as the coded data relating to sender can include all or part of the name and address of this sender and his customer number.————————————————

/8

Furthermore, data relating to the routing of the mailing envelopes can be selected from the memory of computer system 16 and automatically added by it to the coded and/or encrypted data relating to the address of the recipient of each mailing envelope.

Printer 18 is controlled by computer system 16 in order to print labels 20 containing the name and address of the recipient in alphanumeric characters and coded information 24, these labels being then attached to mailing envelopes 22, or else in order to print these information items directly on the mailing envelopes if they are not too thick or if the printer is especially designed for accepting mailing envelopes.

Input terminal 10 can be of the "videotex" type as represented in Figure 1, or of the microcomputer type as represented in Figure 2. In that case, it has display screen 12 and keyboard 14 as in the preceding execution, and central processing unit 26 for processing of the information, containing one or more microprocessors, memories and some means for reading of diskettes and/or other information supports.

The sealed box which constitutes information processing system 16 in the embodiment of Figure 1 can also be used in the embodiment of Figure 2, being connected to central processing unit 26 of the microcomputer. This system 16 could possibly be replaced by a removable memory, protected against illicit access or copying attempts, which could be read by some reading means of central processing unit 26 and in which one would have recorded the program and the data necessary for the encryption and coding of the data which need to appear on the mailing envelopes.

/9

In the execution variant represented in Figure 2, printer 18 of the embodiment of Figure 1 is replaced by electronic buffer 28 which makes it possible to print coded information items 24 on mailing envelopes 22 next to the name and address of the recipient which have been printed plainly or handwritten by the sender.

This electronic buffer 28 can also be used to print coded information items 24 on a label which is then attached on the mailing envelope next to the name and address of the recipient.

8

In another execution variant diagrammatically represented in Figure 3, the device which can be used by the sender is installed in a public place, which can be, for example, a place for selling postage stamps such as a post office or a bar with a tobacco license, and made available to the public for the processing and stamping of mailing envelopes.

The device of Figure 3 has display screen 30, keyboard 32 and information processing means which are integrated in a piece of furniture or box 34 containing coin slot 36 and means 38 for delivery of label 40 (represented in Figure 4) which is intended to be stuck or attached on mailing envelope 42.

In order to use this device, the sender of a mailing envelope must type on keyboard 32 the compete name and address of the recipient and pay, by means of coin slot 36, an amount corresponding to the amount of postage of the mailing envelope. Of course, the data entered by the sender using keyboard 32 can include his name and/or address if desired.

The information processing means provided in this device make it possible, as in the preceding embodiments, to encrypt data such as the postage date and amount, the address of the recipient, the type of mail used and data for identification of the sender or of the computer device which is used, with an encryption key which is assigned to this computer device. These data are then coded, with information relating to the device which is used and to the recipient of the envelope, (for example, his name), in the form of a bar code of conventional type or a more sophisticated code such as PDF 417, and are then printed on self-sticking label 40 which is delivered to the sender of the envelope and which must be stuck on the envelope.

As already indicated, the use of a sophisticated code such as PDF 417 has the advantage that the quantity of coded data which can appear on a mailing envelope is much greater than with a conventional type of bar code. Furthermore, a code such as PDF 417 contains error correcting codes so that defects or printing or reading of the coded information do not prevent normal processing of the envelope by the automatic sorting means of the postal services.

In a more detailed manner, the PDF 417 code of the company Symbol Technologies (N.Y. USA) is a code of the continuous type allowing the coding of approximately 1000 data bytes or more in a graphic symbol such as than represented at 44 in Figures 4 and 5. Such a symbol can contain 3 to 90 rows and 1 to 30 columns of data and can be decoded by two-directional reading. Different modes of data compression can be used.

Quite obviously, such devices as represented in Figure 3 can also be used by postal agents, to whom the users turn over unstamped mailing envelopes which they wish to send.

When the mailing envelopes thus processed are turned over to the postal service for their routing and distribution, the coded information items carried by them are used for facilitating their automatic sorting and make possible automatic accounting and invoicing of the corresponding postages.

9

For this, the postal services are equipped with means 46 for rapid automatic reading of coded information items 44 (or 24) appearing on envelopes 42 (or 22) which are, for example, moved at high speed in the direction indicated by arrow 48 facing means 46.

The latter are connected to information processing means 50, including microprocessors, memories 52 in which are recorded encryption keys and information for identification of the customers to which these keys were allocated, some means 54 for decryption of the encrypted information items which were read by means 46 and means 56 for automatic accounting and invoicing, information processing means 50 being connected, coming out, to automatic sorting means 58 to which data relating to the destinations and routings of the mailing envelope are communicated.

The essential operations of the process according to the invention are diagrammatically represented in the flow chart of Figure 7.

The first operation 60 is a data entry operation, which is performed by the sender of a mailing envelope by means of keyboard 14 of a device of Figures 1 and 2 or keyboard 32 of the device of Figure 3, the entered data including the name and address of the recipient, the value and date of the postage, the type of mail and information for identification of the sender. Depending on the case, the date and/or the value of the postage can be entered by the sender or automatically added to the entered data. Likewise, the information for identification of the sender can be stored in the memory of the devices of Figures 1 and 2 and automatically added to the data entered by the sender, or else can be entered by the sender who is using the device of Figure 3.

/12

The next operation 62 consists of encrypting certain entered data, particularly the data relating to the address of the recipient, to the postage and to a part of the information for identification of the sender, by means of an encryption key which is assigned or allocated to the sender when he is known by the postal services (for example, because of a subscription) or which can be assigned to a device of the type of that of Figure 3, which is put in a public place and which is intended for being used by anyone.

The encrypted data and the other data which are entered are then coded, either in the form of a bar code as represented diagrammatically on the mailing envelopes of Figures 1 and 2, or in the form of a more sophisticated code such as PDF 417 as represented diagrammatically in Figures 4 and 5.

The next operation 64 is printing of the coded data, either directly on the mailing envelope, or on label 20 or 40 which is intended to be stuck on the mailing envelope.

The envelope is then sent by depositing it in a mail box or in a post office as indicated diagrammatically at 66.

The mailing envelope is then processed by the postal services in a line such as that represented diagrammatically in Figure 6. The first operation 68 performed by the postal services is reading and decoding of the coded data appearing on the mailing envelope.

The decoding of the non-encrypted data allows at least partial identification of the sender, as indicated at 70, and this partial identification allows access to the encryption key which was assigned to the sender, as indicated at 72.

The encryption key is used for decryption of the encrypted data of the mailing envelope, decryption 74 allowing access to the address of the recipient, to the value and date of the postage carried on the mailing envelope and confirmation of the identity of the sender, these data, as indicated at 76, being used for writing the date of the postage and debiting the value of the postage on the account of the sender with possibly a part of the data relating to the identity of the recipient, and billing the sender, the sending of the bills taking place after predetermined periods of time which can be variable as a function of the volume of mail mailed by each sender (every day, every week, every two weeks or every month, for example).

The decrypted data available after operation 74 are also used for the automatic sorting of the mailing envelopes as indicated at 78. In the case in which operations 72 for accessing an encryption key and 74 for decryption give a negative result, the corresponding mailing envelope is rejected or put aside by sorting means 58 controlled by information processing means 50.

Thus, the senders who are customers who have at their location a device such as those of Figures 1 and 2 are billed automatically by the postal services after sending of the mail actually posted by them.

When the mailing envelopes have been labeled and stamped by means of devices such as that of Figure 3 which can be used by the public, the invention makes it possible to do an automatic accounting of the operations performed by these devices, distinguishing one from the other by means of the encryption keys assigned to them.

Furthermore, the automatic sorting of the mail is facilitated and accelerated.

In a general manner, the encrypted information appearing on an envelope can contain all or part of the name and/or address of the recipient and all or part of the name and/or address of the sender and/or his customer number.

It should be noted that a system such as that represented in Figure 6 can also be used by a customer who receives a large amount of mail, for the recording and sorting of the mail which is received. For example, a company which every day receives several tens or hundreds of mailing envelopes can very quickly record the receipt of each envelope by reading and decoding of the coded information carried on the envelopes (the value and date of the postage which are encrypted data not having been considered), and can also proceed automatically with a first

11

sorting of the mail received, when the name of the person who is the recipient of an envelope appears in the coded non-encrypted information in addition to the name of the company.

Quite obviously, in this case, information processing means 50 are simplified and do not contain memories 52 for recording of the encryption keys, decryption means 54 and automatic billing means 56.

Claims   /15

1. A process for processing of mailing envelopes, aiming to facilitate the automatic sorting of the envelopes as a function of their destination and the payment of their postage, this process consisting of having affixed on each envelope (22, 42), by the sender, coded information items (24, 44) which can be read by automatic reading means and including data relating to the sender, to the recipient and to the postage of the envelope, certain ones of the coded information items being encrypted moreover, characterized by the fact that it consists, when the envelope is sent, of having coded information items (24, 44) appearing on the envelope read automatically by the postal services in order identify the sender at least partially, of accessing an encryption key from the identity of the sender, of decrypting the encrypted information items using the aforementioned key and of debiting an account of the sender with a sum corresponding to the decrypted value of the postage of the envelope.

2. A process according to Claim 1, characterized by the fact that it consists of automatically establishing, by the postal services, invoices representing the information debited to the accounts of the senders, and of sending then to the senders for payment of the postages.

3. A process according to Claim 1 or 2, characterized by the fact that it consists also of writing on the account of the sender the postage date and at least part of the data relating to the recipient of the envelope.

4. A process according to one of the preceding claims, characterized by the fact that the encrypted and coded information items appearing on the envelope include data other than those which are part of the coded and non-encrypted information items.

5. A process according to Claim 4, characterized by the fact that the data relating to the sender which appear respectively in the encrypted and coded information items and in the coded   /16 non-encrypted information items supplement one another.

6. A process according to one of the preceding claims, characterized by the fact that the data appearing in the encrypted information items include at least part of the name and/or address of the recipient.

7. A process according to one of the preceding claims, characterized by the fact that the coded and non-encrypted information items appearing on the mailing envelope include at least

part of the data for identification of the sender, such as his name and address and/or a customer number.

8. A process according to one of the preceding claims, characterized by the fact that it consists of having the data constituting the coded information items entered by the sender in an information processing device made available to the public, of having the coded information items printed on label (40) and of delivering this label to the sender on condition of payment of the postage value of the mailing envelope.

9. A process according to one of the preceding claims, characterized by the fact that coded information items (44) are in the form of a bar code of sophisticated type such as PDF 417.

10. A system for processing of mailing envelopes, which includes some computer means (10, 16, 18, 28, 30, 32, 34) for the entering, encryption and coding of data relating to the sender and to the recipient of an envelope as well as to its postage, and for printing, on envelope (22) or on label (20, 40), coded information items, certain ones of which are encrypted, and some means (46, 50, 58) installed in the postal services for automatic reading of the coded information appearing on the envelopes, in particular for checking the postage and automatic sorting of the envelopes, characterized by the fact that automatic reading means (46) are connected to some means (50) for processing of the information which have memories (52) in which encryption keys are recorded, each of which is allocated to a different known sender, these information processing means (50) allowing one to access an encryption key from coded information items (24, 44) read on the envelope, to decrypt the encrypted information contained in the aforementioned coded information using this key, to record in memory at least the value of postage of the envelope and the identity of its sender and to do an automatic accounting of the envelopes mailed by known senders, particularly for the purpose of their automatic invoicing.

11. A system according to Claim 10, characterized by the fact that the coded non-encrypted information items (24, 44) appearing on an envelope include at least a part of the name and address of the recipient and an item of data for at least partial identification of the sender, such as his name and/or his address and/or a customer number.

12. A system according to Claim 10 or 11, characterized by the fact that the encrypted information items appearing on an envelope include the value and date of the postage of the envelope, an additional information item for identification of the sender and at least a part of an item of data for identification of the recipient such as, for example, his address.

13. A system according to one of Claims 10 to 12, characterized by the fact that coded information items (24, 44) appearing on an envelope are in the form of a bar code such as, for example, a sophisticated code of the PDF 417 type.
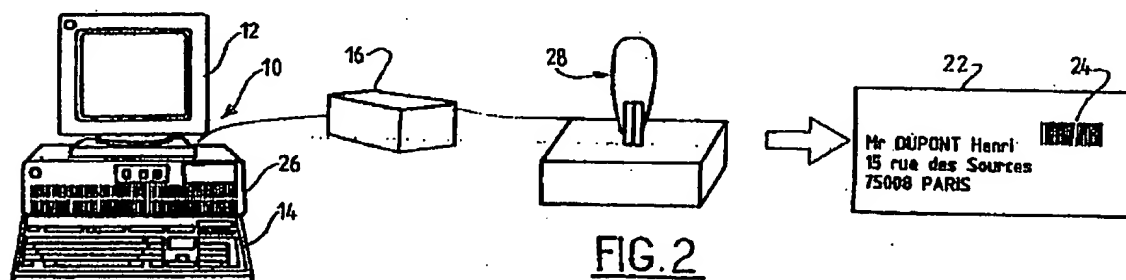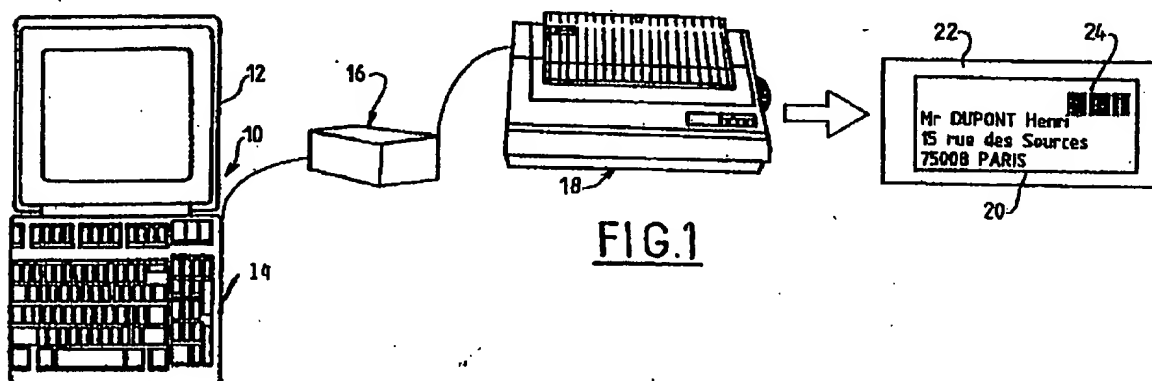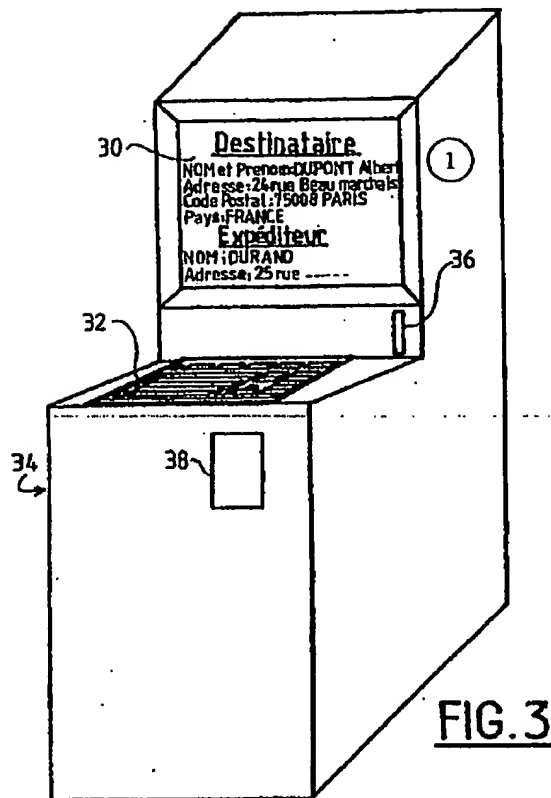
13

14. A system according to one of Claims 10 to 13, characterized by the fact that the aforementioned computer means (10, 16, 30, 32, 34) include some means for determination of the postage values of the envelopes.

/1.

15. A system according to one of Claims 10 to 14, characterized by the fact that the aforementioned computer means (10, 16, 18, 28) are installed at the sites of the customers.
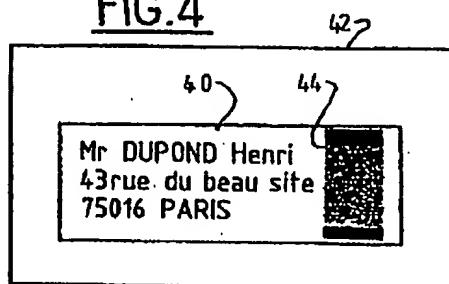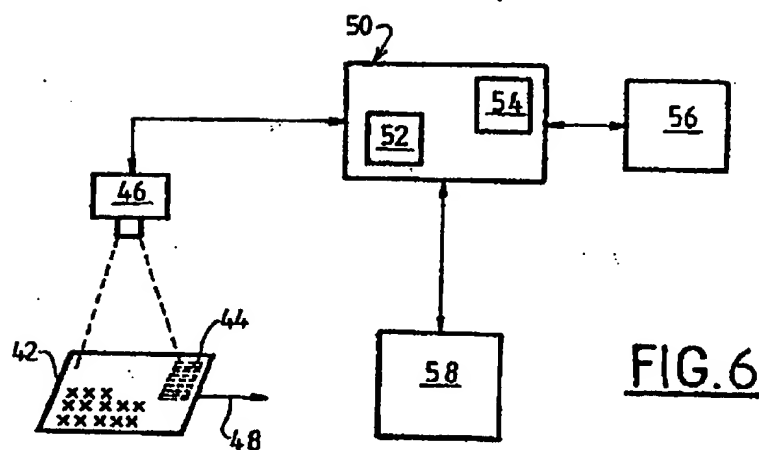
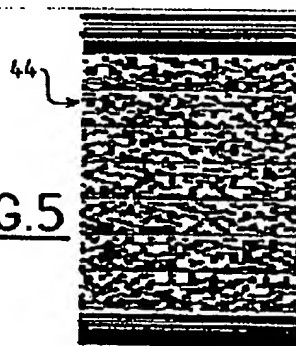16. A system according to one of Claims 10 to 14, characterized by the fact that the aforementioned computer means (30, 32, 34) are installed in a public place and/or a place made available to the public.

FIG.1

FIG.2

FIG.3

Key: 1   Recipient
Last name and first name: Dupont Albert
Address: 24 rue Beaumarchais
Postal code: 75008 Paris
Country: France
Sender:
Last name: Durand
Address: 25 rue...

15

FIG.4

```
                                    42
        40        44
   Mr DUPOND Henri
   43rue. du beau site
   75016 PARIS
```

44

FIG.5

```
          50
                    54
        52              56

    46

  42        44
   XXXXX
   XX XXxx
   XX X XX          FIG.6
   XX XXX
              48           58
```

16

Saisie de données:
  -destinataire
  -affranchissement
  -type de courrier
  -expéditeur   (1)
60

Chiffrement et
codage   (2)
62

Impression   (3)
64

Expédition   (4)
66

68 Lecture et décodage   (5)

70 Identification
    expediteur   (6)

72 Accès à la clé de   (7)   (B) non
    chiffrement

                    oui (A)   Rejet (9)

74 Déchiffrement   (8) non

                    oui

76 inscription   (10)   78 tri   (11)
    débit d'un compte   automatique
    facturation

FIG.7

Key: A   Yes
      B   No
      1   Entering of data:
             - recipient
             - postage
             - type of mail
             - sender
      2   Encryption and coding
      3   Printing
      4   Sending
      5   Reading and decoding
      6   Identification of sender
      7   Access to encryption key
      8   Decryption
      9   Rejection
      10   Debiting of a billing account
      11   Automatic sorting

17

INTERNATIONAL SEARCH REPORT

International Application No
PCT/FR 95/00065

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6   G07B17/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6   G07B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP,A,0 331 352 (ALCATEL BUSINESS SYSTEMS LTD) 6 September 1989 see column 1, line 47 - column 2, line 7; claim 9; figures 1,4	1,4,6-10
A	EP,A,0 540 291 (PITNEY BOWES INC) 5 May 1993 see column 2, line 54 - column 3, line 24; claim 1; figure 1	1-16
A	EP,A,0 356 228 (PITNEY BOWES INC) 28 February 1990 see column 3, line 25 - line 57; claim 1; figure 1	1-16
	-/--	

[X] Further documents are listed in the continuation of box C.   [X] Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"A" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
4 May 1995	30.05.95

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+ 31-70) 340-3040, Tx. 31 651 epo nl, Fax: (+ 31-70) 340-3016	Kirsten, K

Form PCT/ISA/210 (second sheet) (July 1992)

page 1 de 2

18

INTERNATIONAL SEARCH REPORT

	International Application No
	PCT/FR 95/00065

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP,A,0 373 972 (PITNEY BOWES INC) 20 June 1990 see column 3, line 31 - column 4, line 10; claim 1; figure 1	1-16
A	FR,A,2 580 844 (PITNEY BOWES INC) 24 October 1986 see claim 1; figures 1,2	1-16

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

1

page 2 de 2

19

INTERNATIONAL SEARCH REPORT

information on patent family members

Internatial Application No

PCT/FR 95/00065

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A-2580844		JP-A- 62058388	14-03-87
		JP-A- 61292790	23-12-86
		JP-A- 61292791	23-12-86
		US-A- 4776246	04-10-88
		CA-A.C 1263676	05-12-89
		CA-A- 1255800	13-06-89

Form PCT/ISA/210 (patent family annex) (July 1992)

page 2 de 2

20

INTERNATIONAL SEARCH REPORT

information on patent family members

		International Application No
		PCT/FR 95/00065

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
EP-A-331352	06-09-89	AT-T-	107057	15-06-94
		DE-D-	68915816	14-07-94
		DE-T-	68915816	19-01-95
		US-A-	4934846	19-06-90
EP-A-540291	05-05-93	US-A-	5280531	18-01-94
		CA-A-	2081288	29-04-93
EP-A-356228	28-02-90	US-A-	5005124	02-04-91
		US-A-	5229932	20-07-93
		AU-B-	621517	12-03-92
		AU-A-	4024589	01-03-90
		JP-A-	4126574	27-04-92
EP-A-373972	20-06-90	US-A-	5019991	28-05-91
		AU-A-	4684989	21-06-90
		CA-A-	2004717	16-06-90
FR-A-2580844	24-10-86	US-A-	4757537	12-07-88
		US-A-	4725718	16-02-88
		US-A-	4743747	10-05-88
		AU-B-	584187	18-05-89
		AU-A-	5634586	23-10-86
		AU-B-	590752	16-11-89
		AU-A-	5634686	23-10-86
		AU-B-	588308	14-09-89
		AU-A-	6634786	23-10-86
		CA-A-	1259704	19-09-89
		CA-A-	1258916	29-08-89
		CH-A-	675496	28-09-90
		CH-A-	672378	15-11-89
		CH-A-	674098	30-04-90
		DE-A-	3613007	23-10-86
		DE-A-	3613008	13-11-86
		DE-A-	3613025	23-10-86
		FR-A-	2580843	24-10-86
		FR-A-	2580845	24-10-86
		GB-A,B	2173741	22-10-86
		GB-A,B	2174039	29-10-86
		GB-A,B	2173742	22-10-86

Form PCT/ISA/210 (patent family annex) (July 1992)

page 1 de 2